

We claim:

1. A method of controlling weeds, plant pests, or plant pathogens comprising the application of a bioactive herbage (plant material) composition to: 1) soil, greenhouse growing media, or nursery growing media as an amendment; or 2) as top dressing for potted plants in amounts sufficient to control weeds, plant pests, or plant pathogens, wherein said bioactive herbage is obtained from: a) *Monarda* spp.; b) *Chamaemelum* spp.; c) *Matricaria* spp.; d) *Chenopodium* spp; or e) various combinations of a), b), c), and d).
2. The method according to claim 1, wherein said bioactive herbage is obtained from *Monarda* spp.
3. The method according to claim 1, wherein said bioactive herbage is obtained from *Chamaemelum* spp.
4. The method according to claim 1, wherein said bioactive herbage is obtained from *Matricaria* spp.
5. The method according to claim 1, wherein said bioactive herbage is obtained from *Chenopodium* spp.
6. The method according to claim 1, wherein said bioactive herbage composition comprises a mixture of bioactive herbage obtained from: a) *Monarda* spp.; b) *Chamaemelum* spp. and/or *Matricaria* spp.; and, optionally, d) *Chenopodium* spp. or epazote.
7. The method according to claims 1-6, wherein said bioactive herbage compositions contains dried bioactive herbage.
8. The method according to claims 1-6, wherein said bioactive herbage composition comprises additional bioactive herbage (plant material) and wherein said additional bioactive herbage is, optionally, dried.
9. The method according to claim 8, wherein said bioactive herbage composition has one or more activity selected from the group consisting of: a) allelochemic activity; b) allelopathic activity; c) anti-helminthic activity; d) antibiotic activity; e) anti-bacterial activity; f) anti-microbial activity; g) anti-viral activity; h) anti-ascaricide activity; i) bacteriostatic activity; j) candidicide activity; k) candidistat activity; l) disinfectant activity;

m) fungicide activity; n) fungistat activity; o) herbicide activity; p) herbistat activity; q) herbicide-safener activity; r) insecticide-synergist activity; s) phytoalexin activity; t) phytotoxic activity; and u) spice activity.

10. A method of controlling weeds, plant pests, or plant pathogens comprising the application of a bioactive herbage (plant material) composition to soil or greenhouse growing media or nursery growing media as an amendment or as a top dressing for potted plants.

11. The method according to claim 10, wherein said bioactive herbage composition comprises dried bioactive herbage.

12. The method according to claim 10 or 11, wherein said bioactive herbage composition has one or more activity selected from the group consisting of: a) allelochemic activity; b) allelopathic activity; c) anti-helminthic activity; d) antibiotic activity; e) anti-bacterial activity; f) anti-microbial activity; g) anti-viral activity; h) anti-ascaricide activity; i) bacteriostatic activity; j) candidicide activity; k) candidistat activity; l) disinfectant activity; m) fungicide activity; n) fungistat activity; o) herbicide activity; p) herbistat activity; q) herbicide-safener activity; r) insecticide-synergist activity; s) phytoalexin activity; t) phytotoxic activity; and u) spice activity.

13. The method according to claim 12, wherein said bioactive herbage composition has 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, or 21 of said activities.

14. The method according to claim 13, wherein said bioactive herbage composition comprises bioactive plant material or herbage obtained from:

a) one or more plants with allelochemic activity selected from the group consisting of: *Origanum vulgare* (Common Turkish Oregano): Plant; *Coriandrum sativum* (Chinese Parsley): Fruit; *Foeniculum vulgare* (Fennel): Fruit; *Camellia sinensis* (Tea): Leaf; *Cinnamomum verum* (Ceylon Cinnamon): Bark; *Daucus carota* (Carrot): Root; *Lycopersicon esculentum* (Tomato): Fruit; *Mentha x piperita subsp. nothosubsp. piperita* (Peppermint): Leaf; *Ribes nigrum* (Black Currant): Fruit; *Vaccinium corymbosum* (Blueberry): Fruit; *Artemisia dracunculus* (Tarragon): Shoot; *Chamaemelum nobile* (Garden Camomile): Plant; *Humulus lupulus* (Hops): Fruit; *Laurus nobilis* (Bay): Leaf; *Myrtus communis* (Arrayan (Sp.)): Plant; *Rosmarinus officinalis* (Rosemary): Plant; *Ruta graveolens* (Rue): Plant; *Vaccinium myrtillus* (Bilberry): Leaf; *Vitis vinifera* (European Grape): Fruit;

*Aloysia citrodora* (Lemon Verbena): Plant; *Capsicum annuum* (Bell Pepper): Fruit; and combinations of said one or more plants;

b) one or more plants with allelopathic activity selected from the group consisting of *Foeniculum vulgare* (Fennel): Fruit; *Acorus calamus* (Calamus): Rhizome; *Glechoma hederacea* (Alehoof): Plant; *Lepechinia calycina* (Epling's Lepechinia): Plant; *Ocimum basilicum* (Basil): Plant; *Pycnanthemum tenuifolium* (Slenderleaf Mountain Mint): Shoot; *Salvia sclarea* (Clary Sage): Plant; *Satureja douglasii* (Douglas' Savory): Plant; *Zingiber officinale* (Ginger): Rhizome; *Capsicum frutescens* (Cayenne): Fruit; *Coriandrum sativum* (Chinese Parsley): Fruit; *Elettaria cardamomum* (Cardamom): Fruit; *Hedeoma drummondii* (Drummond's Pennyroyal): Plant; *Lavandula latifolia* (Aspic): Plant; *Lavandula x intermedia* (Dutch Lavender): Plant; *Levisticum officinale* (Lovage): Root; *Mentha longifolia* (Biblical Mint): Shoot; *Myristica fragrans* (Mace): Seed; *Myrtus communis* (Arrayan (Sp.)): Plant; *Peumus boldus* (Boldo): Leaf; *Piper nigrum* (Black Pepper): Fruit; and combinations of said one or more plants;

c) one or more plants with anti-helminthic activity selected from the group consisting of *Dryopteris filix-mas* (Male Fern): Rhizome; *Origanum vulgare* (Common Turkish Oregano): Plant; *Mentha pulegium* (European Pennyroyal): Plant; *Rosmarinus officinalis* (Rosemary): Plant; *Salvia officinalis* (Sage): Plant; *Satureja hortensis* (Summer Savory): Plant; *Thymus serpyllum* (Creeping Thyme): Plant; *Thymus vulgaris* (Common Thyme): Plant; *Camellia sinensis* (Tea): Leaf; *Coriandrum sativum* (Chinese Parsley): Fruit; *Glycyrrhiza glabra* (Commom Licorice): Root; *Juniperus sabina* (Sabine): Plant; *Monarda fistulosa* (Wild Bergamot): Plant; *Myrtus communis* (Arrayan (Sp.)): Plant; *Pycnanthemum virginianum* (Virginia Mountain Mint): Shoot; *Satureja montana* (Savory): Plant; *Thymus capitatus* ('Sicilian' Thyme): Plant; *Zea mays* (Corn): Silk Stigma Style; *Thymus zygis subsp. sylvestris* ('Portuguese' Thyme): Shoot; *Achillea millefolium* (Milfoil): Plant; *Aloysia citrodora* (Lemon Verbena): Plant; *Cucumis melo subsp. ssp melo var. cantalupensis* (Cantaloupe): Seed; *Cucumis sativus* (Cucumber): Seed; *Cucurbita pepo* (Pumpkin): Seed; and combinations of said one or more plants;

d) one or more plants with antibiotic activity selected from the group consisting of *Allium cepa* (Onion): Bulb; *Tulipa gesneriana* (Tulip): Bulb; *Allium sativum var. sativum* (Garlic): Bulb; *Berberis vulgaris* (Barberry): Plant; *Ginkgo biloba* (Ginkgo): Leaf; *Glycine max* (Soybean): Seed; *Helianthus annuus* (Girasol): Seed; *Imula helenium* (Elecampane): Root; *Mahonia aquifolium* (Blue Barberry): Root; *Pteridium aquilinum* (Bracken): Plant; *Abelmoschus esculentus* (Okra): Seed; *Acacia catechu* (Black Cutch): Plant; *Acacia senegal*

(Gum Arabic): Plant; *Actaea pachypoda* (American Baneberry): Plant; *Actaea rubra* (Red Baneberry): Plant; *Actaea spicata* (European Baneberry): Fruit; *Adonis vernalis* (Spring Adonis): Plant; *Allium ampeloprasum* (Elephant Garlic): Plant; *Andira inermis* (Cabbage Bark): Bark; *Anemone pulsatilla* (Pasque Flower): Plant; *Annona muricata* (Soursop): Plant; and combinations of said one or more plants;

e) one or more plants with anti-bacterial activity selected from the group consisting of *Origanum vulgare* (Common Turkish Oregano): Plant; *Foeniculum vulgare* (Fennel): Fruit; *Coriandrum sativum* (Chinese Parsley): Fruit; *Ribes nigrum* (Black Currant): Fruit; *Camellia sinensis* (Tea): Leaf; *Glycyrrhiza glabra* (Commom Licorice): Root; *Rosmarinus officinalis* (Rosemary): Plant; *Citrus aurantium* (Bitter Orange): Plant; *Thymus vulgaris* (Common Thyme): Plant; *Daucus carota* (Carrot): Root; *Citrus paradisi* (Grapefruit): Fruit; *Lycopersicon esculentum* (Tomato): Fruit; *Mentha spicata* (Hortela da Folha Miuda): Leaf; *Ocimum basilicum* (Basil): Plant; *Satureja montana* (Savory): Plant; *Humulus lupulus* (Hops): Fruit; *Piper nigrum* (Black Pepper): Fruit; *Matricaria recutita* (Annual Camomile): Plant; *Zingiber officinale* (Ginger): Rhizome; *Citrus reticulata* (Mandarin): Fruit; *Laurus nobilis* (Bay): Leaf; and combinations of said one or more plants;

f) one or more plants with anti-microbial activity selected from the group consisting of *Glycine max* (Soybean): Seed; *Medicago sativa subsp. sativa* (Alfalfa): Plant; *Phaseolus coccineus* (Scarlet Runner Bean): Plant; *Psoralea corylifolia* (Babchi): Root; *Pueraria pseudohirsuta* (Chinese Kudzu): Root; *Sophora subprostrata* (Shan Dou Gen): Root; *Trifolium pratense* (Cowgrass): Flower; *Vigna radiata* (Green Gram): Plant; *Baptisia tinctoria* (Wild Indigo): Leaf; *Brassica oleracea var. gemmifera var. gemmifera* (Brussel-Sprout): Shoot; *Cajanus cajan* (Pigeonpea): Root; *Canavalia ensiformis* (Jack Bean): Leaf Diffusate; *Crotalaria juncea* (Sunhemp): Leaf; *Cytisus scoparius* (Scotch Broom): Flower; *Erythrina crista-galli* (Cockspur Coral Tree): Bark; *Genista tinctoria* (Dyer's Broom): Flower; *Glycine max* (Soybean): Endosperm; *Glycyrrhiza glabra* (Commom Licorice): Shoot; *Laburnum anagyroides* (Golden Chain Tree): Leaf; *Lupinus albus* (White Lupine): Hypocotyl; *Medicago sativa subsp. sativa* (Alfalfa): Leaf; and combinations of said one or more plants;

g) one or more plants with anti-viral activity selected from the group consisting of *Origanum vulgare* (Common Turkish Oregano): Plant; *Lycopersicon esculentum* (Tomato): Fruit; *Thymus vulgaris* (Common Thyme): Plant; *Camellia sinensis* (Tea): Leaf; *Rosmarinus officinalis* (Rosemary): Plant; *Daucus carota* (Carrot): Root; *Foeniculum vulgare* (Fennel): Fruit; *Glechoma hederacea* (Alehoof): Plant; *Glycine max* (Soybean):

Seed; *Matricaria recutita* (Annual Camomile): Plant; *Ribes nigrum* (Black Currant): Fruit; *Vitis vinifera* (European Grape): Fruit; *Citrus sinensis* (Orange): Fruit; *Citrus paradisi* (Grapefruit): Fruit; *Coriandrum sativum* (Chinese Parsley): Fruit; *Allium cepa* (Onion): Bulb; *Humulus lupulus* (Hops): Fruit; *Origanum majorana* (Marjoram): Plant; *Nicotiana tabacum* (Tobacco): Leaf; *Prunus cerasus* (Sour Cherry): Plant; *Thymus serpyllum* (Creeping Thyme): Plant; and combinations of said one or more plants;

h) one or more plants with ascaricide activity selected from the group consisting of *Coriandrum sativum* (Chinese Parsley): Fruit; *Salvia officinalis* (Sage): Plant; *Thymus vulgaris* (Common Thyme): Plant; *Origanum vulgare* (Common Turkish Oregano): Plant; *Acacia farnesiana* (Cassie): Flower; *Allium cepa* (Onion): Bulb; *Allium sativum* var. *sativum* (Garlic): Bulb; *Aloysia citrodora* (Lemon Verbena): Plant; *Althaea officinalis* (Marshmallow): Leaf; *Anethum graveolens* (Dill): Fruit; *Arachis hypogaea* (Groundnut): Seed; *Areca catechu* (Betel Nut): Seed; *A Armoracia rusticana* (Horseradish): Root; *Artemisia absinthium* (Wormwood): Plant; *Artemisia dracunculus* (Tarragon): Leaf; *Artemisia herba-alba* (Desert Wormwood): Plant; *Artemisia maritima* (Sea Wormwood): Plant; *Asarum canadense* (Wild Ginger): Rhizome; *Asimina triloba* (Pawpaw): Fruit; *Avena sativa* (Oats): Seed; *Beta vulgaris* subsp. *vulgaris* (Beet): Leaf; and combinations of said one or more plants;

i) one or more plants with bacteriostatic activity selected from the group consisting of *Achillea millefolium* (Milfoil): Leaf; *Acorus calamus* (Calamus): Rhizome; *Aloysia citrodora* (Lemon Verbena): Plant; *Alpinia galanga* (Greater Galangal): Plant; *Anethum graveolens* (Dill): Fruit; *Angelica archangelica* (Angelica): Root; *Apium graveolens* (Celery): Leaf Essential Oil; *Aralia cordata* (Udo): Root; *Artemisia annua* (Annual Mugwort (GRIN)): Plant; *Artemisia pallens* (Davana): Plant; *Capsicum annuum* (Bell Pepper): Fruit; *Capsicum frutescens* (Cayenne): Fruit; *Carthamus tinctorius* (Safflower): Flower; *Carum carvi* (Caraway): Plant; *Cinnamomum aromaticum* (Canela de la China (Sp.)): Plant; *Cinnamomum camphora* (Camphor): Leaf; *Cinnamomum verum* (Ceylon Cinnamon): Bark; *Cistus ladaniferus* (Ambreine): Leaf; *Citrus aurantiifolia* (Lime): Fruit; *Citrus aurantium* (Bitter Orange): Leaf; *Citrus limon* (Lemon): Leaf Essential Oil; and combinations of said one or more plants;

j) one or more plants with bacteristat activity selected from the group consisting of *Vitis vinifera* (European Grape): Fruit; *Artemisia dracunculus* (Tarragon): Plant; *Camellia sinensis* (Tea): Leaf; *Citrus paradisi* (Grapefruit): Fruit; *Eupatorium perfoliatum* (Boneset): Plant; *Polygonum hydropiper* (Common Smartweed): Plant; *Polygonum*

*hydropiperoides* (Mild Water Pepper): Plant; *Sorbus aucubaria* (Rowan Berry): Fruit; *Vaccinium myrtillus* (Bilberry): Leaf; *Acacia catechu* (Black Cutch): Plant; *Acacia nilotica* (Babul): Plant; *Aesculus hippocastanum* (Horse Chestnut): Bark; *Allium cepa* (Onion): Bulb; *Allium schoenoprasum* (Chives): Leaf; *Ammi visnaga* (Visnaga): Plant; *Anethum graveolens* (Dill): Plant; *Anogeissus latifolia* (Gum Ghatti): Plant; *Arctostaphylos uva-ursi* (Bearberry): Leaf; *Arnica montana* (Leopard's-Bane): Flower; *Berberis vulgaris* (Barberry): Plant; *Brassica oleracea* var. *botrytis* l. var. *botrytis* (Cauliflower): Flower; and combinations of said plants;

k) one or more plants with candidicide activity selected from the group consisting of *Glycyrrhiza glabra* (Commom Licorice): Root; *Mentha spicata* (Hortela da Folha Miuda): Leaf; *Citrus reticulata* (Mandarin): Fruit; *Mentha pulegium* (European Pennyroyal): Plant; *Ribes nigrum* (Black Currant): Fruit; *Origanum vulgare* (Common Turkish Oregano): Plant; *Coriandrum sativum* (Chinese Parsley): Fruit; *Cymbopogon citratus* (Lemongrass): Plant; *Laurus nobilis* (Bay): Leaf; *Lavandula latifolia* (Aspic): Plant; *Lycopersicon esculentum* (Tomato): Fruit; *Ocimum basilicum* (Basil): Plant; *Piper nigrum* (Black Pepper): Fruit; *Thymus vulgaris* (Common Thyme): Plant; *Capsicum frutescens* (Cayenne): Fruit; *Cinnamomum verum* (Ceylon Cinnamon): Bark; *Citrus sinensis* (Orange): Fruit; *Daucus carota* (Carrot): Root; *Levisticum officinale* (Lovage): Root; *Mentha longifolia* (Biblical Mint): Shoot; *Myristica fragrans* (Mace): Seed; and combinations of said plants;

l) one or more plants with candidistat activity selected from the group consisting of *Anethum graveolens* (Dill): Plant; *Ocimum basilicum* (Basil): Plant; *Thymus vulgaris* (Common Thyme): Plant; *Acorus calamus* (Calamus): Rhizome; *Aesculus hippocastanum* (Horse Chestnut): Bark; *Apium graveolens* (Celery): Fruit Essential Oil; *Artemisia dracunculus* (Tarragon): Plant; *Capsicum frutescens* (Cayenne): Fruit; *Carum carvi* (Caraway): Fruit; *Cinnamomum verum* (Ceylon Cinnamon): Bark; *Citrus aurantium* (Bitter Orange): Plant; *Citrus reticulata* (Mandarin): Fruit; *Citrus sinensis* (Orange): Fruit; *Coriandrum sativum* (Chinese Parsley): Fruit; *Cymbopogon martinii* (Palmarosa): Plant; *Daucus carota* (Carrot): Seed; *Eucalyptus citriodora* (Citron-Scented Gum): Leaf; *Fraxinus rhynchophylla* (Chinese Ash): Bark; *Illicium verum* (Chinese Star Anise): Fruit; *Laurus nobilis* (Bay): Leaf; *Lavandula latifolia* (Aspic): Plant; and combinations of said one or more plants;

m) one or more plants with disinfectant activity selected from the group consisting of *Aconitum napellus* (Aconite): Plant; *Adonis vernalis* (Spring Adonis): Plant;

*Aesculus hippocastanum* (Horse Chestnut): Bark; *Allium cepa* (Onion): Bulb; *Allium schoenoprasum* (Chives): Leaf; *Alocasia macrorrhiza* (Giant Taro): Plant; *Anabasis aphylla* (Anabasis): Plant; *Ananas comosus* (Pineapple): Fruit; *Annona muricata* (Soursop): Plant; *Annona squamosa* (Sugar-Apple): Plant; *Apium graveolens* (Celery): Pt; *Arctostaphylos uva-ursi* (Bearberry): Leaf; *Avena sativa* (Oats): Petiole; *Berberis vulgaris* (Barberry): Plant; *Beta vulgaris subsp. subsp. vulgaris* (Beet): Root; *Brassica oleracea var. botrytis l. var. botrytis* (Cauliflower): Flower; *Brassica oleracea var. gemmifera var. gemmifera* (Brussel-Sprout): Leaf; *Brassica oleracea var. capitata l. var. capitata* (Cabbage): Leaf; *Brassica oleracea var. sabellica l. var. acephala* (Curly Kale): Leaf; *Brassica oleracea var. gongylodes* (Kohlrabi): Stem; *Capparis spinosa* (Caper): Plant; and combinations of said one or more plants;

n) one or more plants with fungicide activity selected from the group consisting of *Foeniculum vulgare* (Fennel): Fruit; *Glycyrrhiza glabra* (Common Licorice): Root; *Zingiber officinale* (Ginger): Rhizome; *Daucus carota* (Carrot): Root; *Coriandrum sativum* (Chinese Parsley): Fruit; *Glycine max* (Soybean): Seed; *Ribes nigrum* (Black Currant): Fruit; *Origanum vulgare* (Common Turkish Oregano): Plant; *Lycopersicon esculentum* (Tomato): Fruit; *Piper nigrum* (Black Pepper): Fruit; *Citrus aurantium* (Bitter Orange): Plant; *Lavandula latifolia* (Aspic): Plant; *Myristica fragrans* (Mace): Seed; *Levisticum officinale* (Lovage): Root; *Rosmarinus officinalis* (Rosemary): Plant; *Ocimum gratissimum* (Agbo): Plant; *Capsicum annuum* (Bell Pepper): Fruit; *Cinnamomum verum* (Ceylon Cinnamon): Bark; *Citrus sinensis* (Orange): Fruit; *Laurus nobilis* (Bay): Leaf; *Lavandula x intermedia* (Dutch Lavender): Plant; and combinations of said one or more plants;

o) one or more plants with fungistat activity selected from the group consisting of *Thymus vulgaris* (Common Thyme): Plant; *Citrus aurantium* (Bitter Orange): Plant; *Daucus carota* (Carrot): Root; *Laurus nobilis* (Bay): Leaf; *Myristica fragrans* (Mace): Seed; *Ocimum basilicum* (Basil): Plant; *Origanum vulgare* (Common Turkish Oregano): Plant; *Acorus calamus* (Calamus): Rhizome; *Anethum graveolens* (Dill): Plant; *Artemisia dracunculus* (Tarragon): Plant; *Cinnamomum verum* (Ceylon Cinnamon): Bark; *Coriandrum sativum* (Chinese Parsley): Fruit; *Foeniculum vulgare* (Fennel): Fruit; *Glycyrrhiza glabra* (Common Licorice): Shoot; *Levisticum officinale* (Lovage): Root; *Mentha aquatica* (Water Mint): Leaf; *Mentha x piperita subsp. nothosubsp. piperita* (Peppermint): Leaf; *Myrtus communis* (Arrayan (Sp.): ): Plant; *Nicotiana tabacum* (Tobacco): Leaf; *Pycnanthemum clinopodioides* (Clinopod Mountain Mint): Shoot; *Rosmarinus officinalis* (Rosemary): Plant; and combinations of said one or more plants;

p) one or more plants with herbicide activity selected from the group consisting of *Artemisia dracunculus* (Tarragon): Shoot; *Cinnamomum verum* (Ceylon Cinnamon): Bark; *Coriandrum sativum* (Chinese Parsley): Fruit; *Foeniculum vulgare* (Fennel): Fruit; *Lavandula latifolia* (Aspic): Plant; *Mentha longifolia* (Biblical Mint): Shoot; *Mentha pulegium* (European Pennyroyal): Plant; *Ocimum basilicum* (Basil): Plant; *Piper nigrum* (Black Pepper): Fruit; *Zingiber officinale* (Ginger): Rhizome; *Ocimum gratissimum* (Agbo): Plant; *Origanum vulgare* (Common Turkish Oregano): Plant; *Aloysia citrodora* (Lemon Verbena): Plant; *Chamaemelum nobile* (Garden Camomile): Plant; *Daucus carota* (Carrot): Root; *Laurus nobilis* (Bay): Leaf; *Lavandula x intermedia* (Dutch Lavender): Plant; *Levisticum officinale* (Lovage): Root; *Mentha spicata* (Hortela da Folha Miuda): Leaf; *Myrtus communis* (Arrayan (Sp.)): Plant; *Pycnanthemum tenuifolium* (Slenderleaf Mountain Mint): Shoot; and combinations of said one or more plants;

q) one or more plants with herbistat activity selected from the group consisting of *Trifolium pratense* (Cowgrass): Plant; *Acacia farnesiana* (Cassie): Plant; *Acacia tortilis* (Umbrella Thorn): Leaf; *Adonis vernalis* (Spring Adonis): Plant; *Artemisia absinthium* (Wormwood): Plant; *Arundo donax* (Giant Reed): Plant; *Avena sativa* (Oats): Leaf; *Baptisia tinctoria* (Wild Indigo): Leaf; *Daucus carota* (Carrot): Plant; *Eriodictyon californicum* (Bear's Weed): Resin, Exudate, Sap; *Hordeum vulgare* (Barley): Shoot; *Inula helenium* (Elecampane): Root; *Lupinus albus* (White Lupine): Stem; *Lycopersicon esculentum* (Tomato): Fruit; *Lycoris radiata* (Spider Lily): Bulb; *Lycoris squamigera* (Magic Lily): Bulb; *Medicago sativa subsp. sativa* (Alfalfa): Plant; *Momordica charantia* (Bitter Melon): Fruit; *Morus alba* (Sang-Pai-Pi): Leaf; *Musa x paradisiaca* (Banana): Fruit; *Narcissus tazetta* (Daffodil): Stem; and combinations of said one or more plants;

r) one or more plants with herbicide-safener activity selected from the group consisting of *Medicago sativa subsp. sativa* (Alfalfa): Plant; *Trifolium pratense* (Cowgrass): Flower; *Vigna radiata* (Green Gram): Plant; *Astragalus membranaceus* (Huang Qi): Root; *Baptisia tinctoria* (Wild Indigo): Plant; *Cimicifuga racemosa* (Black Cohosh): Root; *Glycyrrhiza glabra* (Commom Licorice): Root; *Pueraria pseudohirsuta* (Chinese Kudzu): Root; *Sophora angustifolia* (Narrowleaf Sophora): Root; *Sophora japonica* (Japanese Pagoda Tree): Plant; and combinations of said one or more plants;

s) one or more plants with insecticide-synergist activity selected from the group consisting of *Sesamum indicum* (Ajonjoli (Sp.)): Seed; *Perilla frutescens* (Perilla): Leaf; *Anethum graveolens* (Dill): Fruit; *Apium graveolens* (Celery): Plant; *Arctium lappa* (Burdock): Plant; *Carum carvi* (Caraway): Fruit; *Coriandrum sativum* (Chinese Parsley):



Fruit; *Daucus carota* (Carrot): Root; *Eleutherococcus senticosus* (Ci wu jia (Pinyin): ): Root; *Foeniculum vulgare* (Fennel): Fruit; *Levisticum officinale* (Lovage): Seed; *Myristica fragrans* (Mace): Leaf; *Oenanthe aquatica* (Water Fennel): Fruit; *Oenanthe crocata* (Water Dropwort): Plant; *Oenanthe javanica* (Javan Water Dropwort): Fruit; *Pastinaca sativa* (Parsnip): Root Essential Oil; *Petroselinum crispum* (Parsley): Leaf; *Pimpinella anisum* (Anise): Plant; *Piper nigrum* (Black Pepper): Fruit; *Sassafras albidum* (Sassafras): Root; *Vaccinium corymbosum* (Blueberry): Fruit; and combinations of said one or more plants;

t) one or more plants with phytoalexin activity selected from the group consisting of *Daucus carota* (Carrot): Root; *Brassica oleracea* var. *capitata* l. var. *capitata* (Cabbage): Leaf; *Foeniculum vulgare* (Fennel): Fruit; *Glycyrrhiza glabra* (Commom Licorice): Root; *Angelica sinensis* (Chinese Angelica): Root; *Phaseolus coccineus* (Scarlet Runner Bean): Plant; *Phaseolus lunatus* (Butter Bean): Leaf; *Angelica dahurica* (Bai Zhi): Root; *Apium graveolens* (Celery): Plant; *Coriandrum sativum* (Chinese Parsley): Fruit; *Glehnia littoralis* (Bei Sha Shen): Rhizome; *Glycine max* (Soybean): Seed; *Ruta graveolens* (Rue): Plant; *Trifolium pratense* (Cowgrass): Plant; *Angelica archangelica* (Angelica): Plant; *Apium graveolens* (Celery): Pt; *Arachis hypogaea* (Groundnut): Sprout Seedling; *Baptisia tinctoria* (Wild Indigo): Leaf; *Capsicum annuum* (Bell Pepper): Fruit; *Chenopodium album* (Lambsquarter): Plant; *Daucus carota* (Carrot): Shoot; and combinations of said plants;

u) one or more plants with phytotoxic activity selected from the group consisting of *Gentiana acaulis* (Stemless Gentian): Root; *Gentiana lutea* (Gentian): Root; *Gentiana scabra* (Japanese Gentian): Root; and combinations of said one or more plants;

v) one or more plants with spice activity selected from the group consisting of *Alliaria petiolata* (Garlic Mustard): Plant; *Allium schoenoprasum* (Chives): Plant; *Armoracia rusticana* (Horseradish): Root; *Brassica juncea* (Mustard Greens): Seed; *Brassica nigra* (Black Mustard): Seed; *Brassica oleracea* var. *botrytis* l. var. *botrytis* (Cauliflower): Leaf; *Brassica oleracea* var. *gemmifera* var. *gemmifera* (Brussel-Sprout): Seed; *Brassica oleracea* var. *capitata* l. var. *capitata* (Cabbage): Leaf; or

w) various combinations of said plants of subparagraphs a) through v).

15. A bioactive herbage composition for use as: 1) an amendment to soil, greenhouse growing media, or nursery growing media; or 2) a top dressing for potted plants comprising bioactive herbage obtained from: a) *Monarda* spp.; b) *Chamaemelum* spp.; c) *Matricaria* spp.; d) *Chenopodium* spp; e) epazote; or various combinations of a), b), c), d)

and e) and additional bioactive herbage that has one or more activity selected from the group consisting of: a) allelochemic activity; b) allelopathic activity; c) anti-helminthic activity; d) antibiotic activity; e) anti-bacterial activity; f) anti-microbial activity; g) anti-viral activity; h) anti-ascaricide activity; i) bacteriostatic activity; j) candidicide activity; k) candidistat activity; l) disinfectant activity; m) fungicide activity; n) fungistat activity; o) herbicide activity; p) herbistat activity; q) herbicide-safener activity; r) insecticide-synergist activity; s) phytoalexin activity; t) phytotoxic activity; and u) spice activity, wherein said bioactive herbage composition is, optionally, dried.

16. The composition according to claim 15, wherein said additional bioactive herbage composition has 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, or 21 of said activities.

17. The composition according to claim 15 or 16, wherein said bioactive herbage is obtained from *Monarda* spp.

18. The composition according to claim 15 or 16, wherein said bioactive herbage is obtained from *Chamaemelum* spp.

19. The composition according to claim 15 or 16, wherein said bioactive herbage is obtained from *Matricaria* spp.

20. The composition according to claim 15 or 16, wherein said bioactive herbage is obtained from *Chenopodium* spp.

21. The composition according to claim 15 or 16, wherein said bioactive herbage composition comprises a mixture of bioactive herbage obtained from: a) *Monarda* spp.; b) *Chamaemelum* spp. and/or *Matricaria* spp.; and, optionally, c) *Chenopodium* spp. or d) epazote.